Taylor Pond Watershed Survey Report

June 2023

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Acknowledgments

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This project was led by Taylor Pond Association with support from Androscoggin Valley Soil & Water Conservation District (AVSWCD), the City of Auburn, and the Maine Department of Environmental Protection (Maine DEP).

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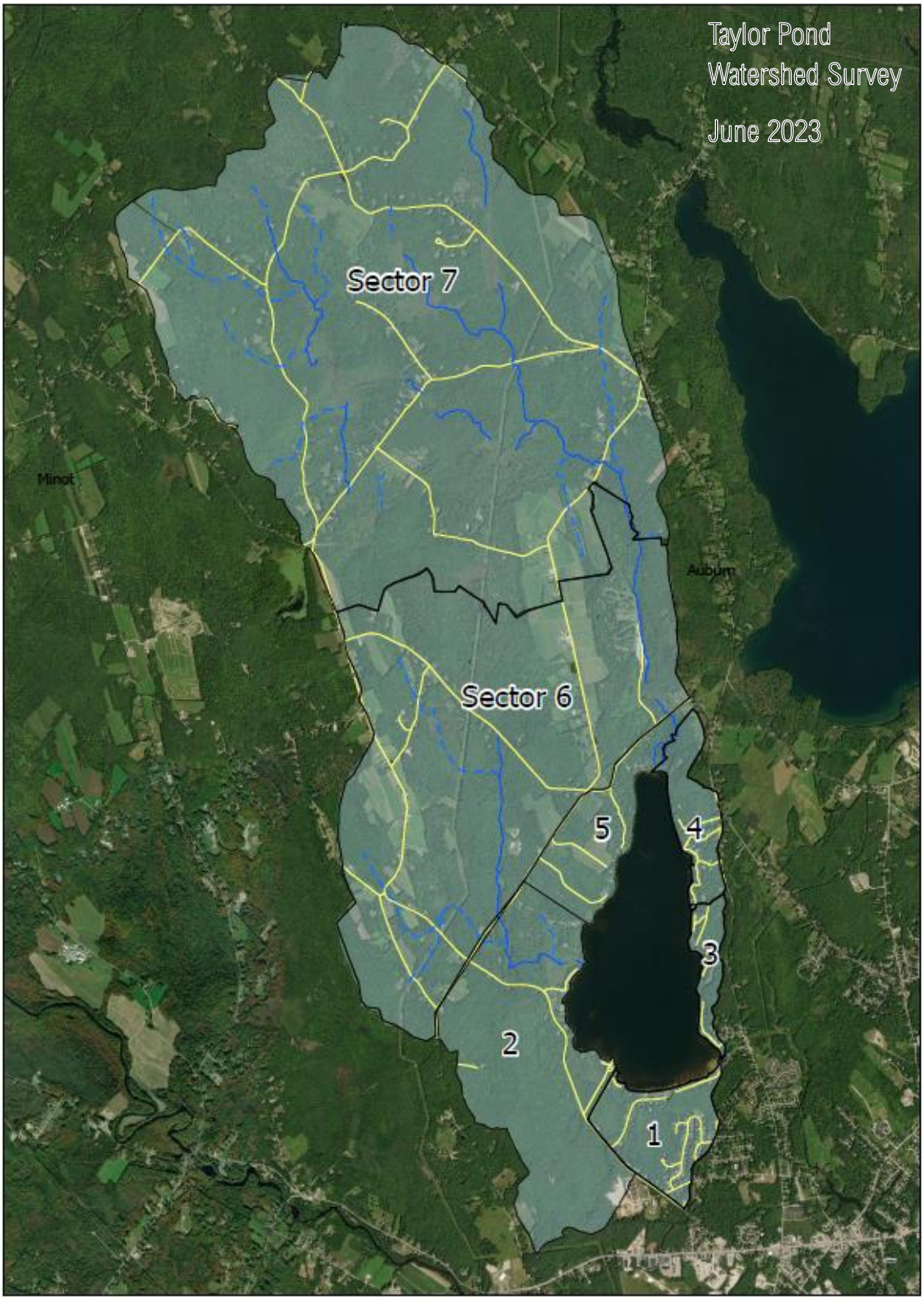


Figure 1: Survey Sector Map

Introduction

This report is for residents of the Taylor Pond Watershed and all other interested parties. It provides the results and analysis of a soil erosion survey completed in 2023. The survey was conducted in response to concerns about Taylor Pond's water quality and a desire to preserve the pond for future generations to enjoy.

Threats to Water Quality

The greatest threat to Taylor Pond's water quality is non-point source (NPS) pollution, primarily from soil erosion. Soil erosion commonly occurs in areas where forested lands have been developed, particularly on residential properties, driveways, and roads.

Stormwater runoff is the water that travels over impervious surfaces (like roads, driveways, and roofs), picking up pollutants and soil particles along the way, and ending in our rivers and ponds. Soil particles can decrease water clarity and disrupt conditions necessary to support a healthy environment for fish and other aquatic life. Soil particles bind easily to excess nutrients (mostly phosphorus) from fertilizers, pesticides, pet waste, and septic systems, which can greatly impact lake water quality.

Phosphorus occurs naturally in soil and is a critical nutrient for supporting plant growth yet in excess it can considerably impact lake water quality. Excess phosphorus washing into Taylor Pond from soil erosion and other sources can increase algal and aquatic plant growth. As these plants die off, the amount of dissolved oxygen available in the lake's water column decreases. Fish and other more advanced aquatic organisms rely on oxygen-rich waters for survival. Sources of excess phosphorus loading to a lake include fertilizer, pet waste, failing or improperly operating septic systems, erosion from shoreline properties, and "impervious" areas such as rooftops and paved roads and driveways.

Any soil erosion that you see within the Taylor Pond watershed is likely to end up in the pond one way or another. Small incidents of erosion on single properties collectively amount to an entire dump truck of sediment, soil, and other excess nutrients added to our ponds yearly. Sometimes these excess nutrients can cause visible algae blooms, but more often it results in small changes in water quality that, over time, damage the ecology, aesthetics, and property values around the ponds. Either way, we want to stop it before it becomes a problem. This is why we recommend watershed surveys every 8-10 years.

Taylor Pond Watershed and its Water Quality

Taylor Pond is in the City of Auburn in Androscoggin County, Maine. It is a small pond with 5.4 miles of shoreline and an area of 653 acres. The entire Taylor Pond watershed is approximately 4,700 acres in area and is heavily developed. The watershed area that drains into the pond is 14.6 square miles and extends across Auburn and Minot. All land within the watershed (outlined in blue on Figure 2) drains directly into the pond through a network of streams, ditches, and overland flow. The pond has a volume of 11,643 acre-feet, and flushing rate of 1.34 flushes/year. It outlets into a small brook, Taylor Brook, that flows into the Androscoggin River. Taylor Pond is relatively shallow; much of the pond is less than 6 feet deep, it has a mean depth of 17 feet, and a maximum depth of 44 feet. It is roughly 2 miles long and 1 mile wide. It is located at an elevation of 240 feet above sea level.

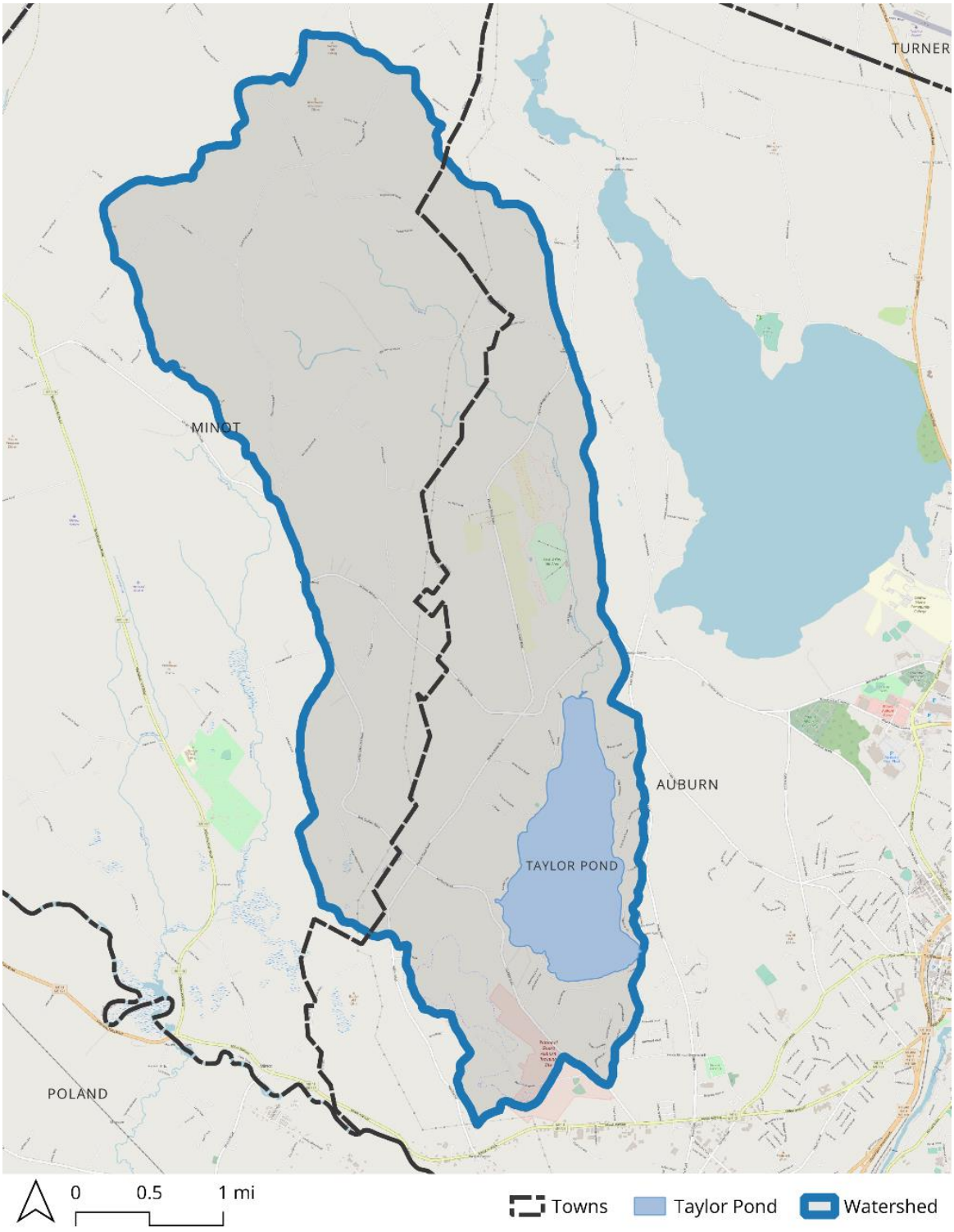


Figure 2: Taylor Pond Watershed

Taylor Pond is currently listed as *Threatened* on Maine DEP's list of *Nonpoint Source Priority Watersheds* based on multiple criteria for this classification – primarily, sediment chemistry, current water quality, and the potential for future moderate development to take place in the watershed (Maine DEP).

The Maine DEP has classified Taylor Pond as a waterbody "Most at Risk" from watershed development, based on current water quality, and projections for development in the 14-square-mile watershed (Scott Williams, Local Limnologist; Lake & Watershed Associates). Due to this status, both the pond and the entire watershed are protected by laws to ensure the continued high quality of the water (Taylor Pond Association Website).

Land use in the Taylor Pond watershed is predominately residential. The pond's shoreline is heavily developed with over 200 seasonal and year-round homes. It is home to a private campground, a private beach, a ski area, two active farms, and several small logging operations. The easterly shore of Taylor Pond is moderate to steeply sloping, which has created problems from the two and three-tiered development along the shoreline.

The DEP and volunteers have monitored Taylor Pond's water quality since 1975. Based on this historical data, the overall water quality of Taylor Pond is slightly below average, compared to several hundred lakes throughout Maine for which data are available. This assessment is based on overall lake productivity, as determined by Secchi Transparency, Total Phosphorus, Chlorophyll-a, and summer Dissolved Oxygen profiles (Scott Williams)

The historical Secchi transparency—a measure of water clarity—is slightly below average, the average total phosphorus average is moderately high, and summer planktonic algal density, while relatively low, is close to the moderate threshold. Late summer dissolved oxygen concentration is virtually depleted in the water column in the deepest area of the lake. The chemistry of the bottom sediments is such that there is a potential for phosphorus to be released from the sediments during periods of anoxia (Scott Williams).

Increases in lake productivity (meaning production of organic matter) over time can lead to reduced water clarity due to an increase in planktonic algal growth in the lake. Taylor Pond has experienced brief late summer "ephemeral" algal blooms associated with lake turnover/mixing (Scott Williams).

Summary of Prior Watershed Work

In 1991, the Androscoggin Valley SWCD, Taylor Pond Association (TPA) and Maine DEP conducted a Chapter 319-funded watershed survey and identified 115 erosion sites in the Taylor Pond watershed. Roads and residential sites were the largest percentage of issues identified. From 1992 to 1995, two phases of 319-funded implementation projects installed 63 BMPs in 14 key areas throughout the watershed.

The most recent survey was conducted between 2002-2005 with 134 sites identified. The Androscoggin Valley SWCD, Taylor Pond Association and Maine DEP worked together again to complete a survey, do an extensive amount of outreach to local residents, and completed a 319-funded project where 11 town roads were fixed in the watershed.

The Taylor Pond Association is involved in conservation efforts around the pond every year, hosting events for outreach and education on the pond's water quality and risks due to erosion and phosphorus. TPA tests the

water quality for phosphorus, color, conductivity, pH, and living organisms annually. Reports can be found on their website. TPA supports the Maine LakeSmart program, surveying shorefront properties around the pond and offering recommendations to homeowners to improve their site for the quality of the pond and wildlife. TPA has also conducted a few invasive species surveys over the past couple of years.

Residents have also worked to improve loon habitat around the pond, conducting loon counts, as well as installing a floating nesting raft this year to encourage more nesting loons on the pond. This program was funded by Maine Audubon.

Local support for lake protection has continued to grow over the years. Taylor Pond is appreciated by residents and visitors during all seasons. It is an attractive swimming location, provides skating, skiing, and ice fishing during the winter, and supports warm water fish populations making it a popular fishing pond. Taylor Pond is a significant social, recreational, and economic resource to the City of Auburn.

Survey Purpose and Methods

Purpose of the Watershed Survey

The primary purpose of the watershed survey was to identify and prioritize existing sources of polluted runoff—in particular soil erosion sites—within the Taylor Pond watershed and to provide the basis to obtain federal funds to assist in fixing those identified sites. However, of equal importance, other benefits of the survey were to:

- Raise public awareness of the connection between land use and water quality, and the impact of polluted runoff.
- Inspire people to become active stewards of the watershed.
- Use the information gathered as one component of a long-term pond protection strategy.
- Make recommendations to landowners for fixing erosion problems on their properties.

The purpose of the survey was NOT to point fingers at landowners with problem spots, nor was it to seek enforcement action against landowners not in compliance with ordinances. Local citizen participation was essential in completing the watershed survey and will be even more important for implementation in upcoming years. With the leadership of AVSWCD and TPA, and assistance from local groups and agencies concerned with water quality, the opportunities for stewardship are limitless.

The Survey Method

The survey was conducted as a way to document all the places where stormwater runoff is creating erosion and potentially carrying pollutants and other harmful nutrients to the pond. Methods outlined in Maine DEP's "A Citizen's Guide to Volunteer Lake Watershed Surveys" were used. The survey was conducted by volunteers with the help of trained technical staff from the Maine DEP, AVSWCD, and other local conservation organizations. Planning for the watershed survey began in 2022, with the formation of a watershed steering committee composed of representatives from Taylor Pond Association, Maine DEP, and AVSWCD.

In late May 2023, volunteers were trained in survey techniques and erosion identification during a two hour zoom workshop. Volunteers were then ready to join trained technical staff the following week on June 3rd to conduct the survey. Prior to the survey, DEP created maps and survey packets for each team to use during the survey. The watershed was divided into seven sections (called 'sectors') so that teams could be assigned a sector to survey. Volunteers and technical staff were broken into seven teams and spent the day on foot and by car, documenting erosion on the roads, properties, driveways, and foot trails in their assigned sectors. See Figure 3 for a map of the sectors within the watershed.

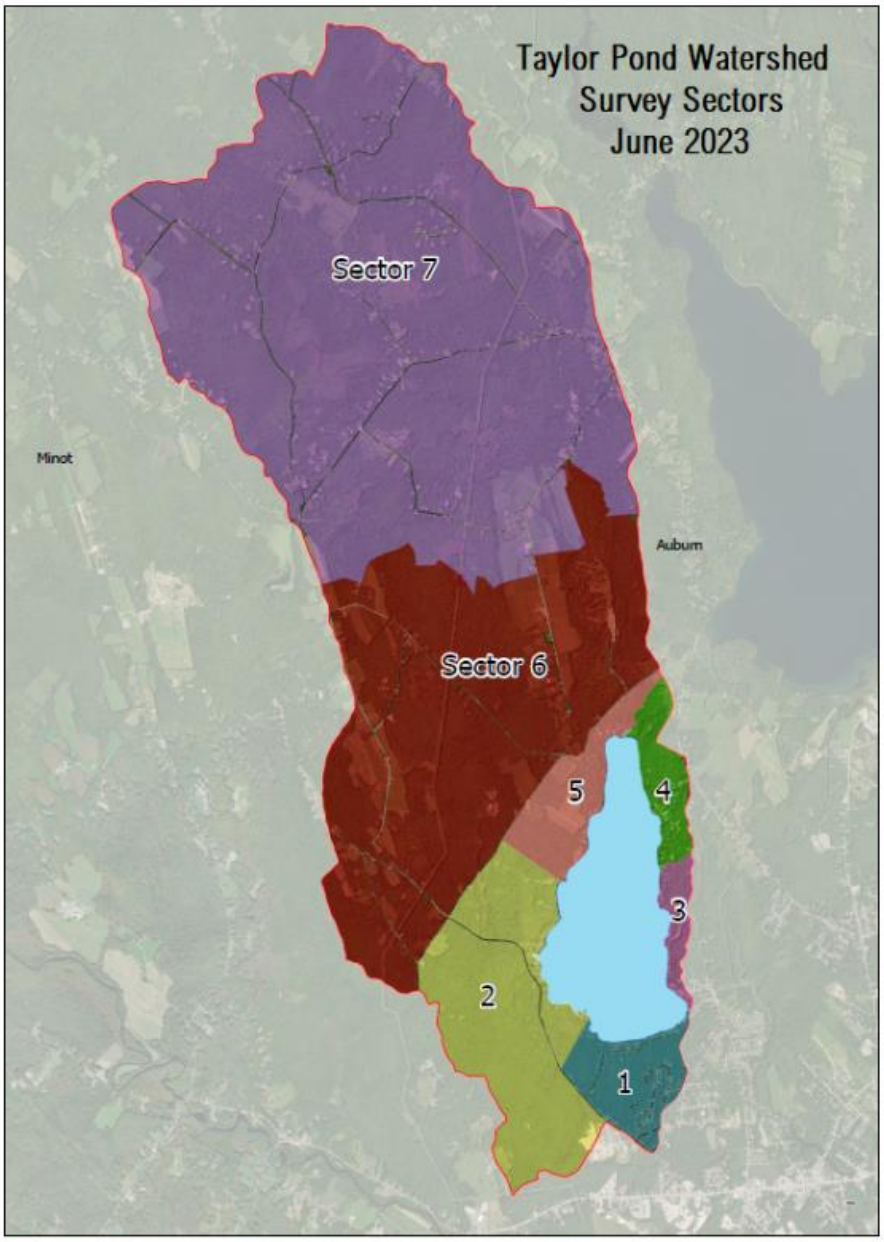


Figure 3: Watershed area divided into seven sectors.

All developed areas of the entire watershed and stream crossings were surveyed, other than properties that opted out. The teams collected data using standardized forms (see Appendix A for survey form). Additional survey work occurred after the survey by volunteers and technical leaders. Data collected on the day of the survey included information on the type of land use, a description of the problem, and the level of impact on water quality. See Appendix B for the complete list of identified sites. During the field survey, teams also recommended solutions to remediate each identified erosion source, along with estimates of the cost and technical level required to do so. The collected data were entered into a database and the documented erosion sites were plotted on maps and prioritized by the watershed steering committee. This report includes the survey findings, remediation priorities, site maps, next steps, and a complete list of identified erosion sites.

Watershed Survey Results

Findings Related to Impact

During the 2023 Taylor Pond Watershed Survey **83 sites** were identified as current or potential sources of pollution to the ponds water quality (Figure 5). This is significantly less than the number of sites identified during the last survey in 2005.

Each site identified during the survey was rated for its potential impact on the lake (Figure 4). Impact is based on the size of the site, its slope, amount of soil eroded, and proximity to water. Of the 83 sites identified during the survey **31 were marked as low impact**—meaning sites with limited soil transport off-site. **36 sites were identified as medium impact**—meaning sites where sediment is transported off-site, but not at a high magnitude. Only **16 sites were identified as high impact**—large sites with significant erosion that flows directly into a stream or the pond. High impact sites are contributing the most to the pollution of the pond and decline of water quality. High impact sites should be addressed first, but low impact sites may be easily fixed by landowners.

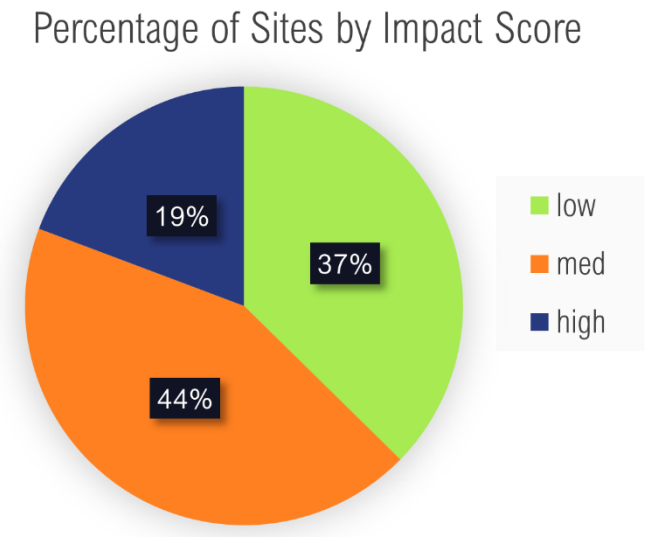


Figure 4: Percentage of Sites by Impact Score

Impact to the pond was assigned by considering the size of disturbed area, slope, soil type, amount of soil eroding, proximity to water, and size of buffer.

- Low impact eroding sites are those with limited transport of sediment off-site.
- Medium impact sites are those where sediment is transported off-site, but the erosion does not reach a high magnitude.
- High impact sites are large sites with significant erosion that flows directly into the pond, stream, or ditch.

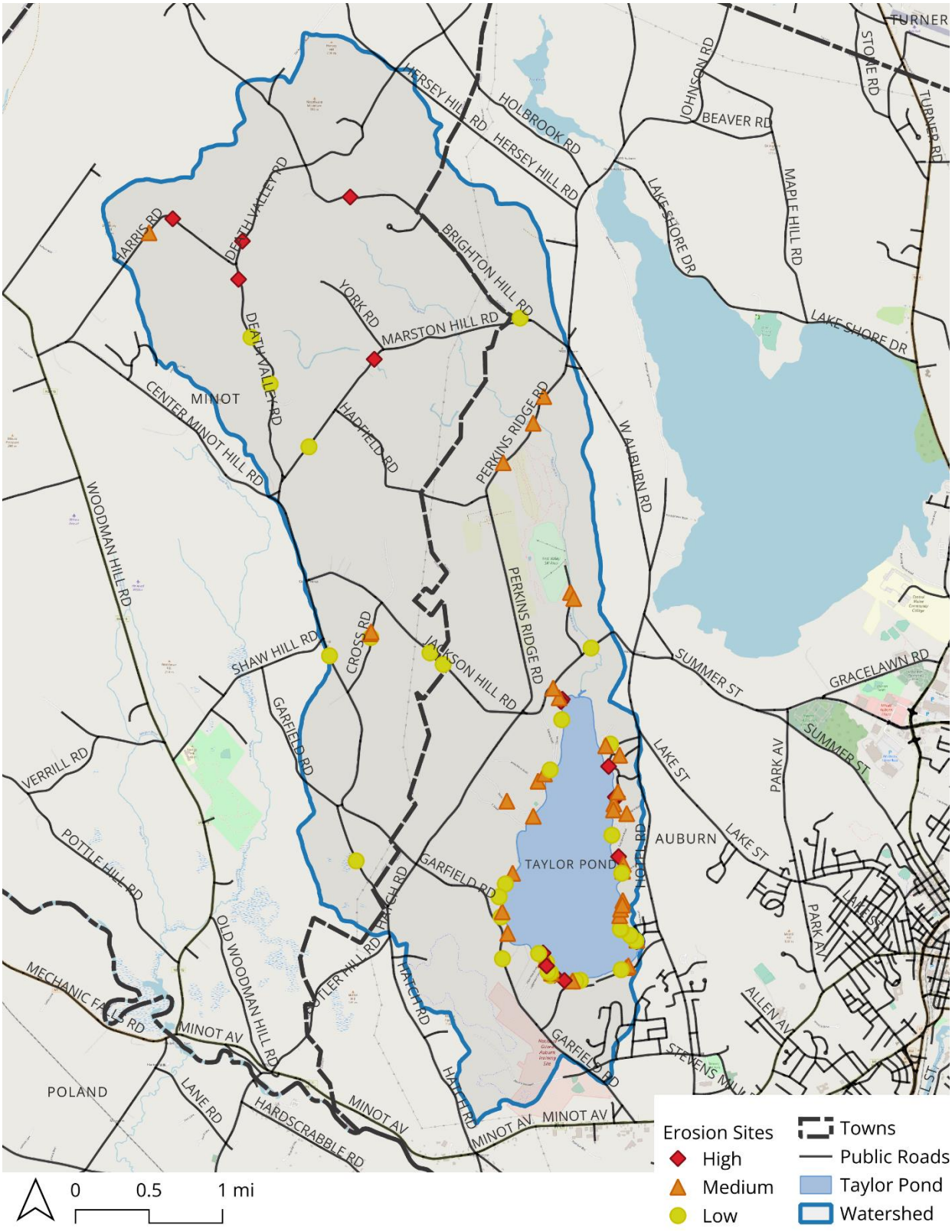


Figure 5: Watershed Map with 83 Identified Erosion Sites

Findings by Land-Use Type

Identified sites were categorized by their associated type of land use. Land use types included “Town Road”, “Private Road”, “Residential/Driveway”, “Beach/Boat Access”, “Commercial”, and “Trail/Path”.

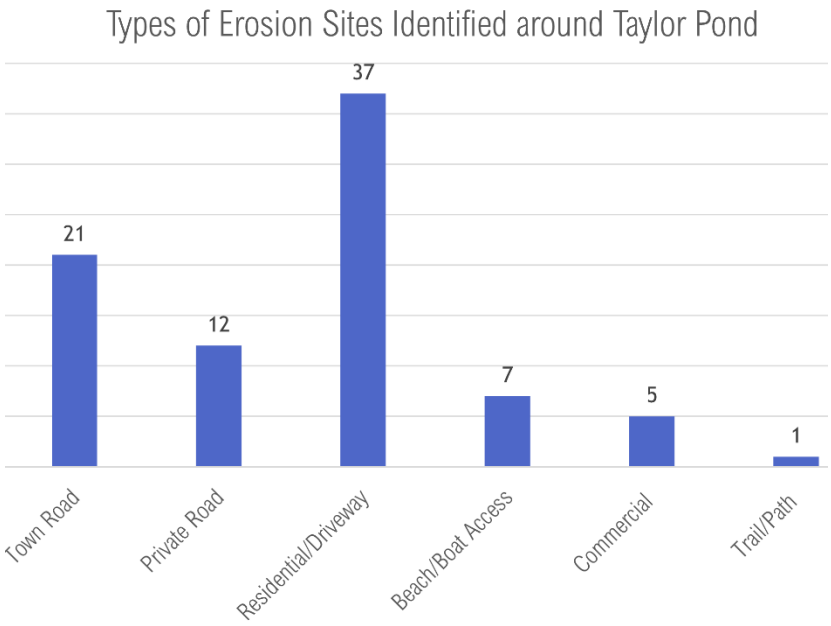


Figure 6: Site types and impact rating of identified erosion site

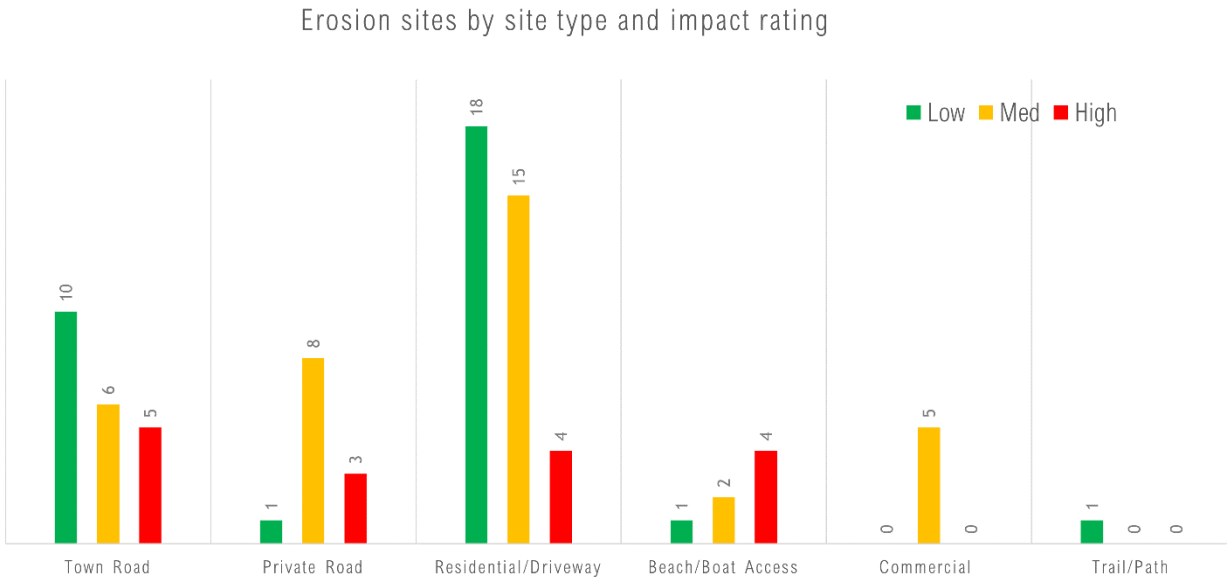


Figure 7: Erosion sites by Site Type and Impact Rating

Residential

37 sites were identified in residential areas including driveways; this represented the largest category of site type (46% of all sites). Many of the sites identified were bare soil or sheet erosion leading directly to the lake, most of these sites were listed as low impact, and low cost to fix. Of these 37 sites, 18 were listed as low-impact, 15 were medium-impact, and 8 high-impact. This is typical of many watershed surveys. Residential sites tend to have less severe erosion and can be fixed easily with low-to-moderate labor and materials cost. Individual landowners can play a big role in helping address these problems.

Figure 8: Example of surface erosion identified on a residential site.

Survey team recommendation to install check dam(s) to slow water flow so it can infiltrate before it reaches the pond.

Figure 9: More dramatic erosion identified on a residential site.

Runoff is eroding the shoreline behind retaining wall is eroding, causing other problems.

Town and Private Roads

Town roads made up the second largest category by site type (25%) with private roads third (14%). This totals 33 erosion sites identified on roads (both town and private). 8 roads were identified as high impact, 14 roads were identified as medium impact, and 11 roads were identified as low impact (Figure 10).

Common problems at road sites included road shoulder erosion, culvert needing replacing (too small, perched, misaligned, crushed, etc.), and inadequate ditching or ditch erosion. Road erosion tends to be a larger problem with a greater impact to the pond. Focusing efforts on fixing these problems will dramatically reduce erosion and sedimentation leading to the pond, in turn, improving overall water quality. This will require reaching out to towns and road associations to accomplish the work.

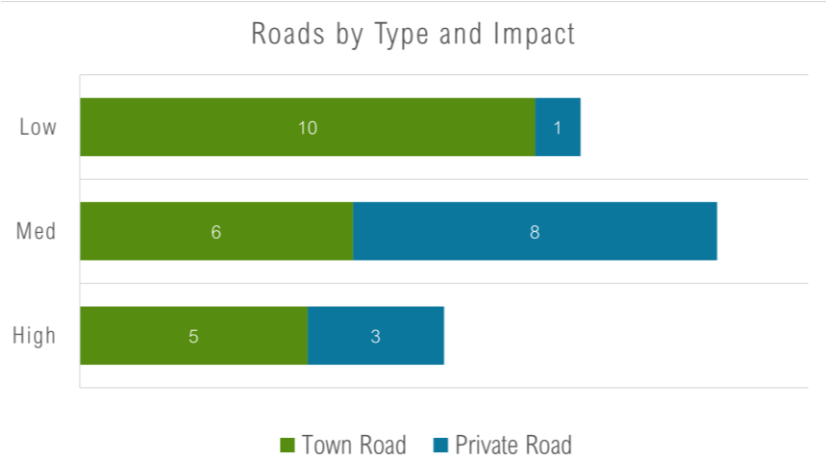


Figure 10: Roads by type and Impact

Figure 11: A high-impact town road

Gully forming and eroding road shoulder on Harris Road. Culvert is perched and too small. Survey team recommends replacing and enlarging the culvert, installing check dams in the ditch, vegetate shoulder, and armor culvert with stone.

Beach and Boat Access

7 sites were identified as beach or boat access. 4 sites were labeled as high-impact, 2 were medium-impact, and 1 was low-impact.

Beach access sites are often vulnerable because they are heavy-use areas (by people on foot and vehicles) often cleared of vegetation with no buffers. Walking paths and trails usually lead directly to these access points, making it easier for water to channelize and bring sediment down to the pond. Common problems on Taylor Pond at beach access sites were sheet erosion leading directly to the lake, lack of buffers, eroded roads/paths, lack of water bars to divert water, road shoulder erosion, and undercut shoreline erosion.

Figure 12: High-Impact Beach Access site

Road shoulder uphill from beach access is eroding and bringing runoff directly to pond. Survey team recommends installing runoff diverters, defining foot path, improve buffer and address ditching issue on uphill roadway.

Figure 13: High-Impact Beach Access site

Culvert is being diverted directly to beach access area. Large amounts of sediment present all the way down to the pond. Survey team recommends rip rap and further assessment by technical staff or engineer.

Commercial Sites

5 medium impact sites were identified on commercial sites. Commercial sites often have similar problems as residential sites, but properties are owned by businesses or organizations. Commercial properties are often at a greater risk of developing erosion and runoff issues because they have larger development footprints, with higher amounts and densities of impervious surfaces. These types of sites may not have a lot of foot traffic, but water quality and erosion best management practices (BMPs) are often not considered by their owners. The types of erosion found on these sites vary, and it may be more challenging to get owners to make a change, depending on funding they have available to remedy these problems.

Figure 14 + 15: High Impact Commercial Site

Severe runoff from parking lot is depositing sediment directly into the stream. The problem is very visible during high flow events.

Trails/Foot Paths

One low impact site was identified as a trail or foot path. Trails or foot paths are well trafficked areas that often lead to the water's edge. It is very easy for water to channelize along these paths, picking up pollutants and depositing them into the water. Trails should meander, so that water has a chance to slow and infiltrate. Foot paths should be well defined and covered with mulch, stone, or another surface material so that water doesn't channelize.

Figure 16: Low Impact Trail/Foot Paths Site

Surface erosion found leading directly to lake. Recommendation to cover with erosion control mulch, install runoff diverter and stabilize foot path.

Low Impact Sites

Figure 17: Low Impact Residential Site

Sheet Erosion leading directly to lake.

Figure 18: Low Impact Driveway Site

Sheet Erosion leading directly to lake.

Medium Impact Sites:

Figure 19: Medium Impact Private Road Site

Figure 20: Medium Impact Driveway Site

High Impact Sites

Figure 21: High Impact Private Road Site

Rill/Gully Erosion leading directly to lake.

Figure 22: High Impact Town Road

Road shoulder erosion and sediment deposition directly into stream

Findings by Location

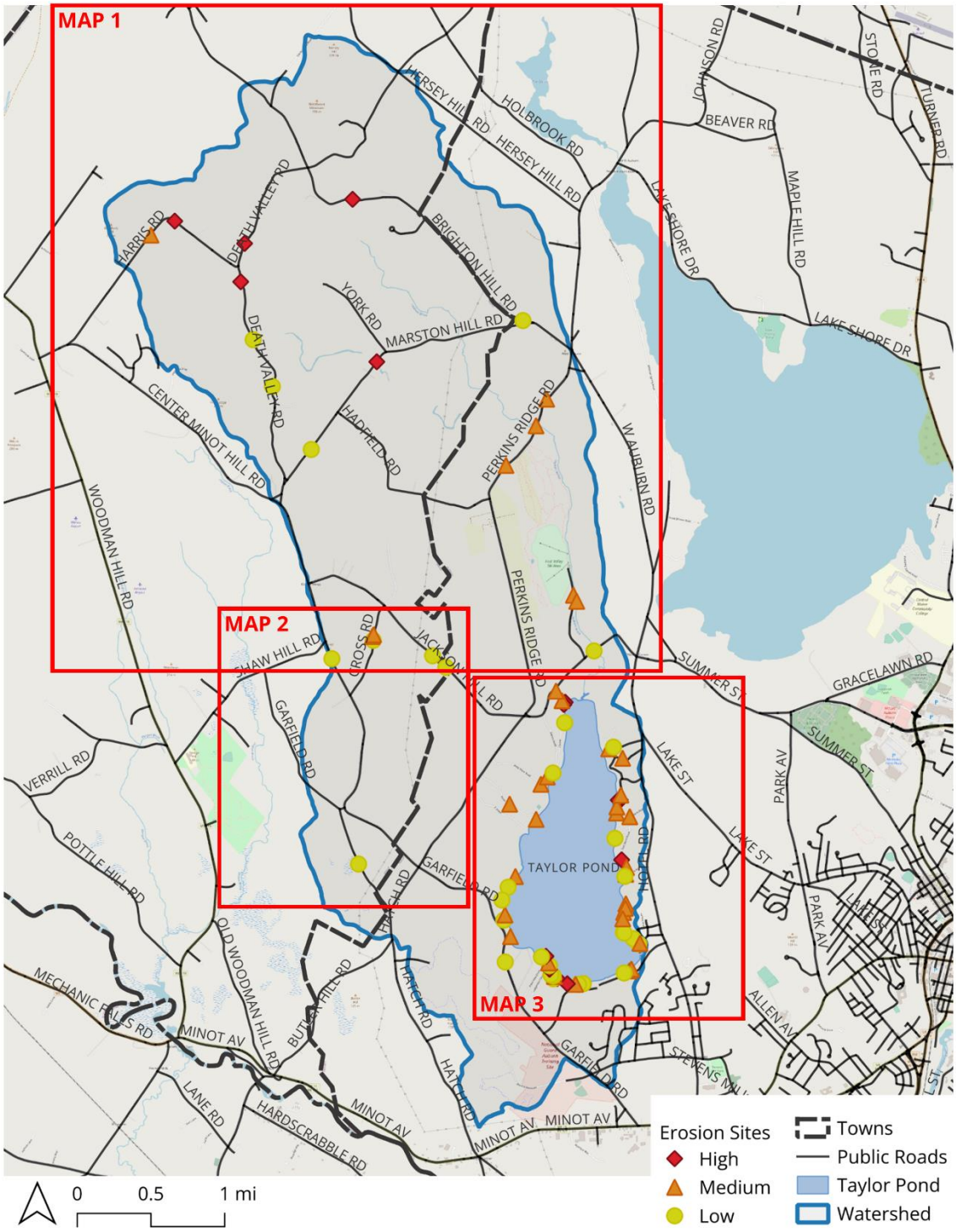


Figure 23: Map of Taylor Pond Watershed with map insets

Figure 24: Map 1 Inset – Northern Section of Watershed

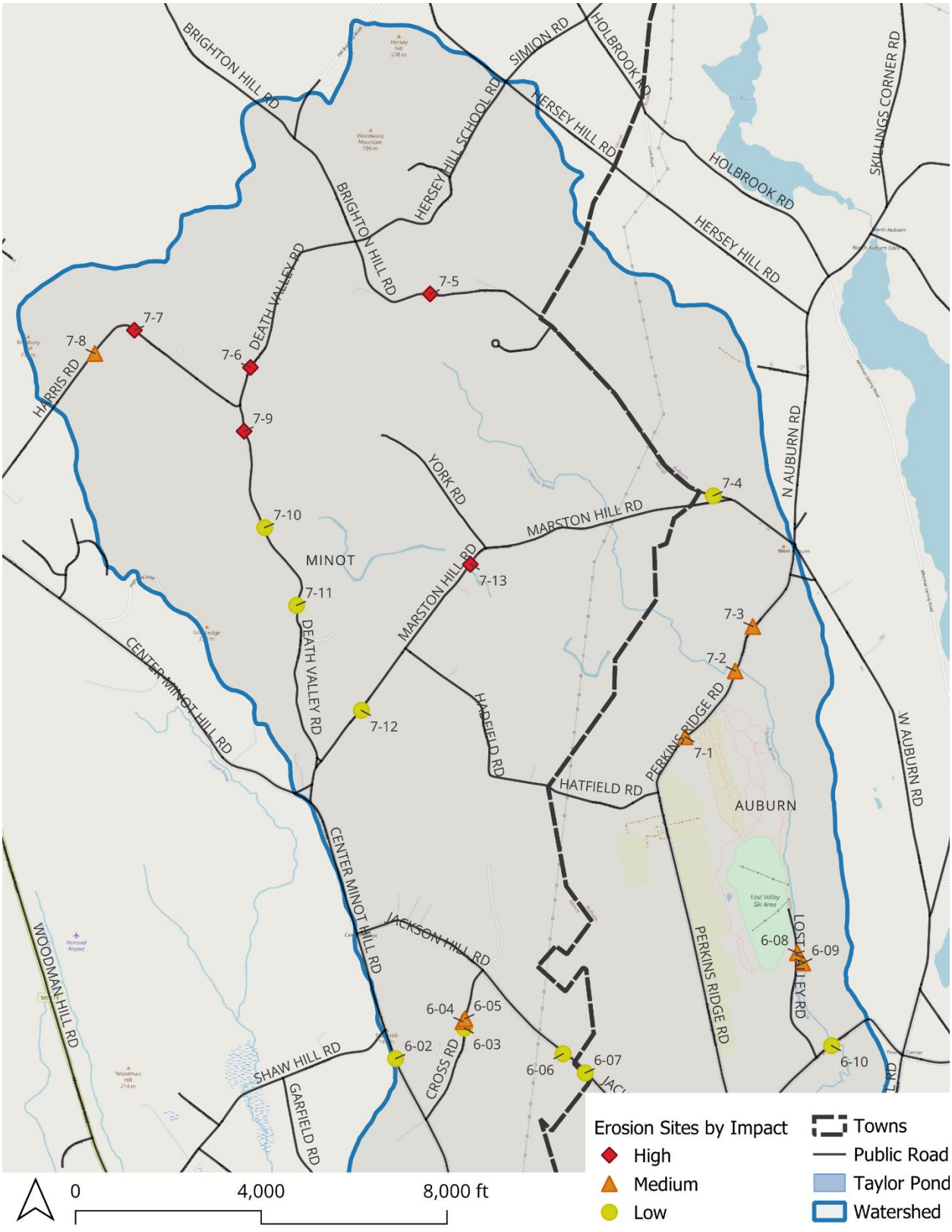


Figure 25: Map 2 Inset – Western Section of Watershed

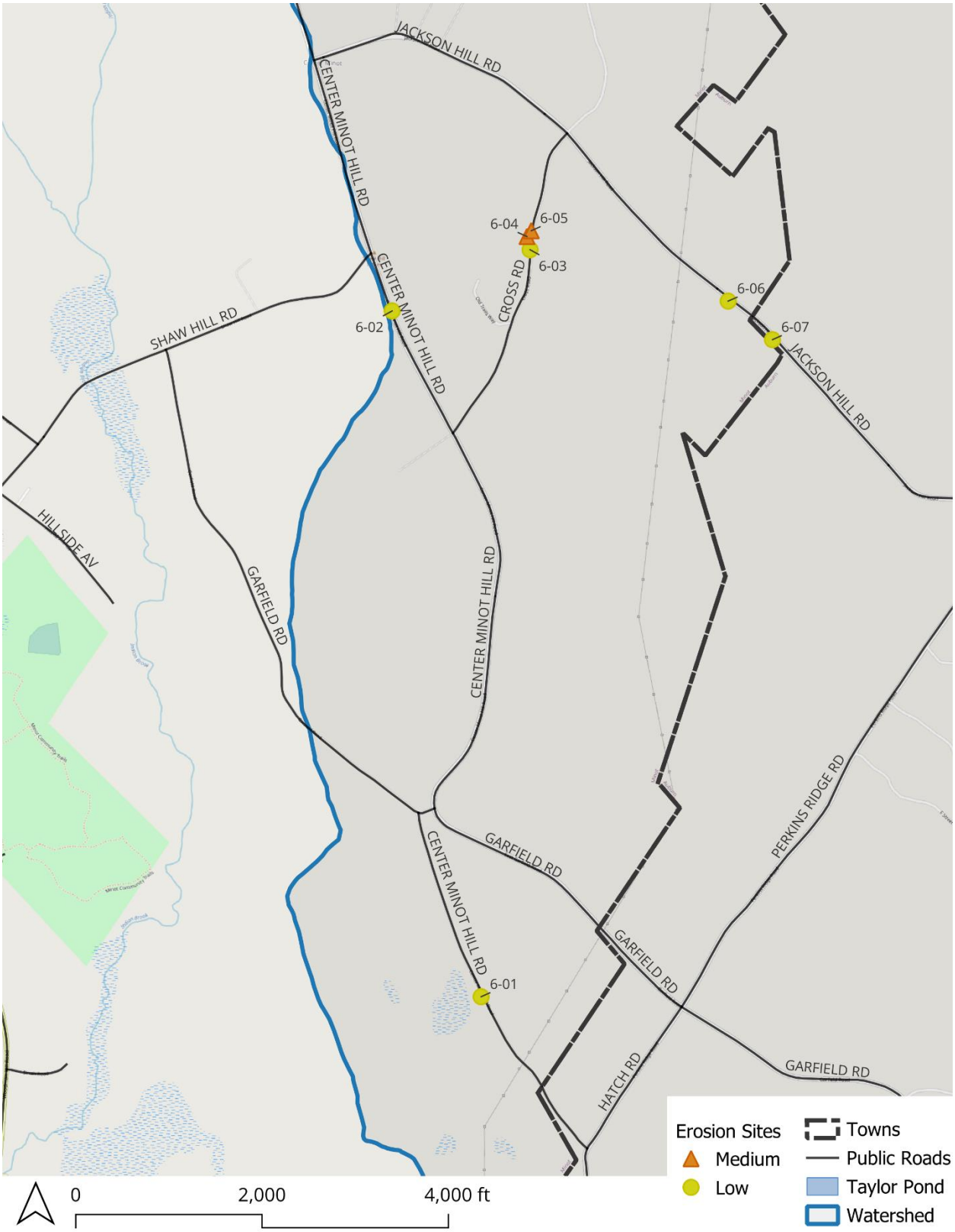
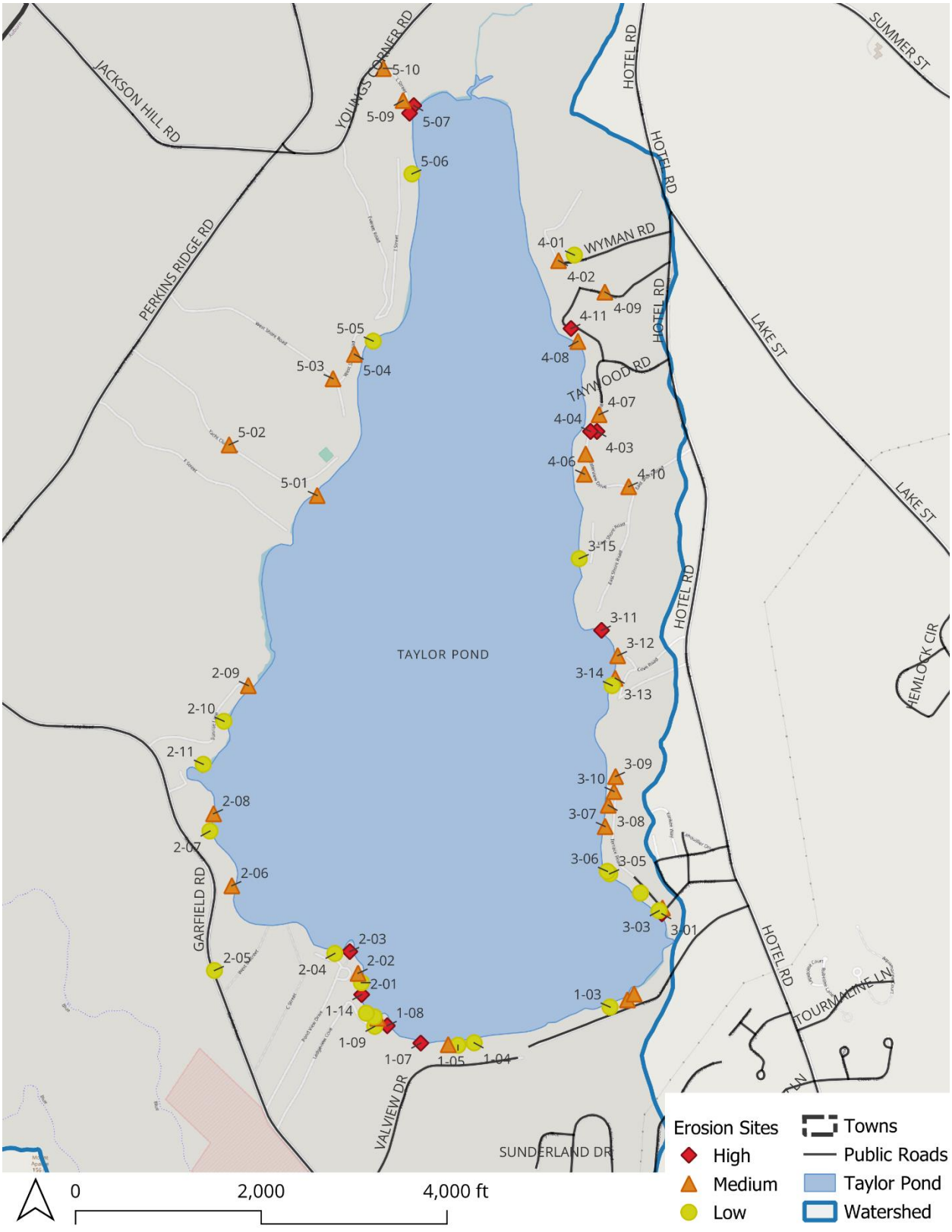


Figure 26: Map 3 Inset – Taylor Pond Direct Shoreline



Remediation Options

Common recommendations may use terminology that homeowners aren't familiar with. The table below has a little bit more information about what some of these recommendations may mean for you and your property.

Culverts	
Armor Inlet or Outlet	Stone, or similar aggregate material, can be used to armor the areas outside the inlet or outlet to protect them from further erosion.
Enlarge Culvert	If the amount of stormwater draining to a culvert increases due to new development or more impervious surfaces, the culvert may need to be enlarged to accommodate for the larger volume of stormwater. Culverts that are sized too small can cause erosion due to high velocity runoff discharging from the outlet.
Access Drainage Area	The drainage area of a culvert, areas that drain runoff to the inlet of a culvert, may change over time. The increases in stormwater in a particular area may require a new BMP or strategy.
Install Plunge Pool	Plunge pools are structures that are installed outside of outfalls to reduce high velocity runoff and turn it into sheet flow. These structures are not installed directly in streams.
Remove Clog	Over time, culverts can collect sediment and other debris that can restrict flow and cause larger drainage issues. Occasional maintenance is needed to clean out clogs from culverts to ensure they are working as intended.
Replace	Culverts may need to be replaced as they deteriorate over time naturally or inadvertently damaged or crushed beyond repair.

Ditch	
Install Check Dams	Check dams are berms, often made with stone or other aggregate materials, that can be installed in ditches to reduce the velocity of channelized stormwater runoff.
Install Turnouts	Turnouts are additions to ditches that allow stormwater runoff to divert away from the ditch and towards a natural, vegetated area. This allows the runoff to slow down and infiltrate into the soil. It reduces the rate of erosion and allows sediment in the water to settle.
Vegetate	Bare areas can be seeded in ditches to stabilize soil and prevent erosion. Vegetation also slows down the velocity of the stormwater runoff in ditches.

Roads and Driveways	
Install Catch Basin	A catch basin may be recommended to install on a road if it is experiencing drainage issues or sedimentation in a low spot.
Install Runoff Diverters	Runoff diverters can be installed into driveways and roads in the form of rubber razor water bars, open top culverts, and broad based dips. These diverters move runoff off roads quickly and into vegetated areas where the water can infiltrate down.
Reshape (Crown)	Reshaping or crowning a road can help divert water from the roadway and prevent erosion and other drainage issues.
Construction Site	
Install Erosion and Sedimentation Controls	
Paths	
Install Infiltration Steps	Infiltration steps are structures (stairs/steps) made from crushed stone that helps infiltrate stormwater runoff and prevent it from causing surface erosion on slopes often used as foot paths.

Roofs	
Install Drywell at Gutter Downspout	A drywell is a small area of crushed stone that is installed at the discharge point of a gutter downspout to collect runoff and reduce the energy from high velocity flows.
Install Infiltration Trench	An infiltration trench is a trench lined with crushed stone that is installed along the dripline of a roof to prevent erosion from roof runoff.
Install Rain Barrel	Rain barrels can be used to collect and store water from roof runoff. Gutter downspouts can be moved to redirect runoff into rain barrels. Collected runoff is helpful for conserving water and can be used to water gardens or other plants.
Vegetation	
Establish Buffer Add to Buffer	Adding vegetation to the shoreline can help act as a buffer for collecting sediment and filtering pollutants that could make their way to the pond. Vegetation also stabilizes the shoreline by holding soil in place and preventing erosion. Vegetation along the shoreline also improves habitat for wildlife that live in and near the pond.
Limit/No Raking	Limiting raking and leaving a layer of leaves or pine needles on the ground can help reduce surface

	erosion from rainfall. The decomposition of leaf litter can also be beneficial for building healthy soil.
Seed Bare Soil	Seeding bare soil can help stabilize soil to prevent erosion and will also help reduce the velocity of stormwater runoff.
Other	
Erosion Control Mulch	Erosion control mulch is a specifically designed mulch that can be used on bare or exposed soil to help prevent erosion from rainfall or runoff. This is helpful to use until an area can be seeded and vegetation is established.
Install Rain Garden	Rain gardens are bowl shaped gardens that have stormwater runoff intentionally diverted towards them for the purpose of filtration.
Install Rip Rap	Riprap can be installed in instances where considerable soil erosion is occurring on an unstable bank slope that needs to be armored to prevent further erosion or washouts. It should be noted that riprap is intended mainly for stabilization and does not actively filter pollutants from stormwater (like a vegetative buffer).

Next Steps

Homeowners interested in fixing any identified erosion problems on their site should contact the Taylor Pond Association or the Androscoggin Valley Soil & Water Conservation District as soon as possible. A 10-year Watershed Based Protection Plan is being created with the information gathered from the watershed survey. The protection plan will create a list of action items, methods, and timeline for ongoing lake protection efforts and to address the highest water quality impact sites identified during the survey. This up-to-date plan will allow Taylor Pond to be eligible for federal grant funding under the Clean Water Act (Section 319) to support the improvement projects we have planned for. Addressing these NPS sites found from the watershed survey and maintaining the water quality of Taylor Pond will require the combined efforts of the TPA, landowners, and state and local organizations. If you have further questions, want to be more involved, or have an erosion site on your property that you would like assistance and further recommendations with, please contact TPA or AVSWCD.

Resources

Information for Landowners

Gravel Road Maintenance Manual: A Guide for Landowners on Camp and other Gravel Roads.
Kennebec County Soil and Water Conservation District and Maine DEP. April 2016.
www.maine.gov/dep/land/watershed/camp/road/gravel_road_manual.pdf

A Guide to Forming Road Associations.
Maine Department of Environmental Protection. January 2020.
www.maine.gov/dep/land/watershed/road_assoc_guide_2020_edit.pdf

Maine Shoreland Zoning – A Handbook for Shoreland Owners.
Maine Department of Environmental Protection. Spring 2008.
www.mainerealtors.com/wpcontent/uploads/2019/02/citizenguide.pdf

Conservation Practices for Homeowners.
Maine DEP and Portland Water District. 2006. 24 fact sheets.

Specific recommendations or practices were advised by technical staff during the watershed survey. Additional information can be found on the MDEP website through their 24 fact sheets on *Conservation Practices for Homeowners.* These factsheets detail different common conservation practices and provide instructions, illustrations, and photos on their installation and maintenance. Factsheets include information on Infiltration steps, Open Top Culverts, Rain Gardens, Paths and Walkways, Plants – Full Sun & Wet, Waterbars, Permitting and more.
www.maine.gov/dep/land/watershed/materials.html

Contractors Certified in Erosion Control Practices.
Maine DEP. www.maine.gov/dep/land/training/ccec.html

The Lake Book: A handbook for Lake Protection.
Maine Lakes. www.lakes.me/lakebook

Protect Your Pond Brochure.
Maine Lakes. 2021. www.lakes.me/protect

Yardscaping Factsheets
Cumberland County Soil & Water Conservation District
CCSWCD has factsheets related to the Yardscaping program. Factsheets include information on Addressing Driveway Runoff, Pollinator Gardens, How to Compost, Mowing, Pets and Our Lawns, Turnouts, Yard Waste and more.
https://www.cumberlandswcd.org/documents-1/yardscaping

Common Shrubs for Central Maine Shorelines.
Sue Gawler and Jack Bouchard for Maine Lakes. https://cdn.branchcms.com/DrynVOJolO-1457/docs/Lake%20Library/Common-Shrubs-5.14.21.pdf

Lakes Like Less Lawn.
Portland Water District. 2017. www.pwd.org/sites/default/files/lakes-llike-less-lawn.pdf

Lakeside Living: Caring for your Septic System.
Maine Lakes. 2021. https://cdn.branchcms.com/DrynVOJolO1457/docs/Lake%20Library/Septictwo-pager-11x17-FINAL-5.14.21.pdf

Septic System Permit Search.
This service provided by The Division of Environmental and Community Health of the Maine Department of Health and Human Services allows citizens to search for the septic plans for a provided address. This service is provided by a third party working in partnership with the State of Maine: https://apps.web.maine.gov/cgi-bin/online/mecdc/septicplans/index.pl

Contacts

Taylor Pond Association

585 Garfield Rd
Auburn, ME 04210
Phone: Dana Little (207)-576-6563
www.taylorpond.org

Androscoggin Valley Soil & Water Conservation District (AVSWCD)

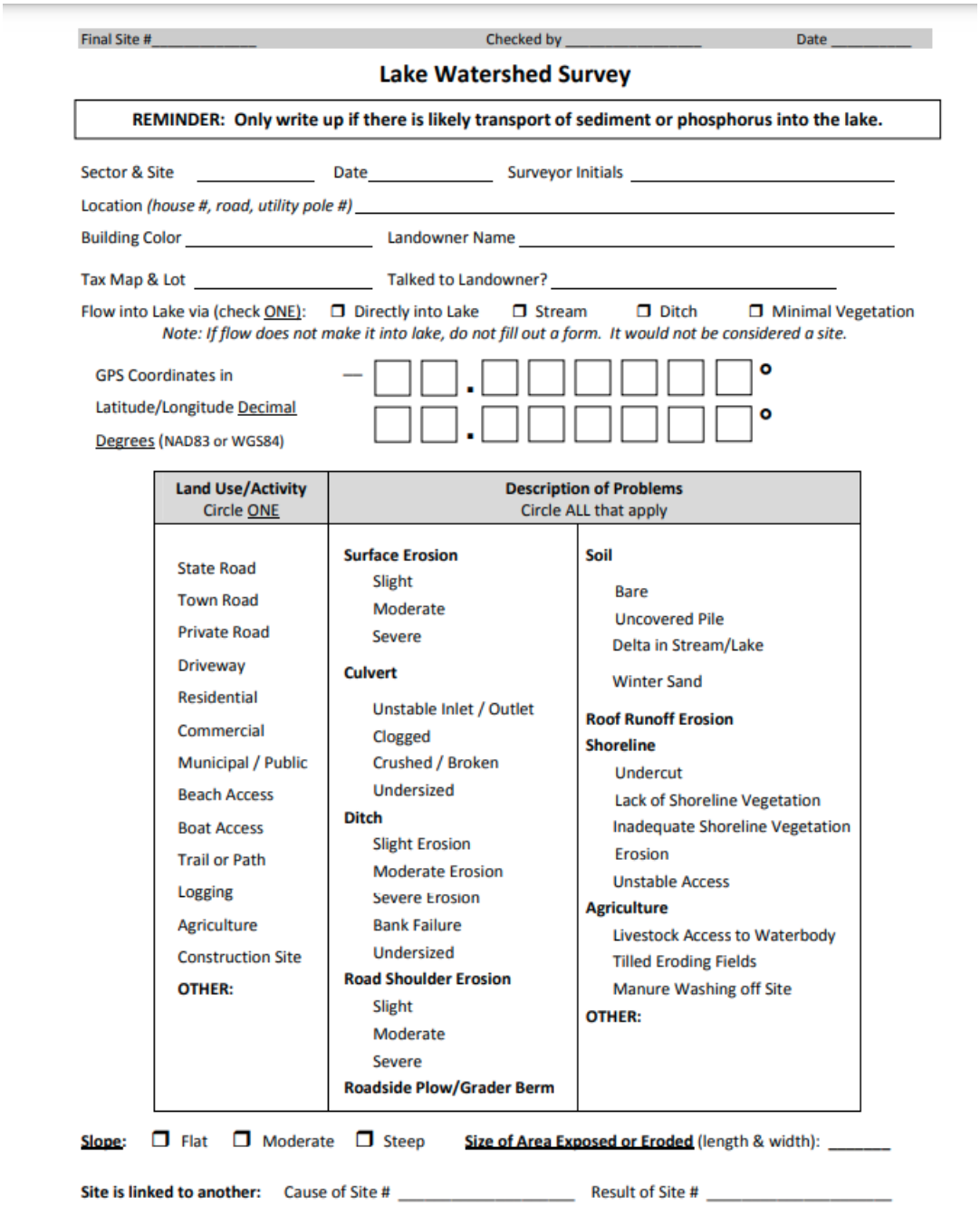
254 Goddard Road, Lewiston, ME 04240
Phone: Emma Lorusso (207)-241-5374
www.androscogginswcd.org

Maine Department of Environmental Protection (Maine DEP)

Watershed Management and/or Shoreland and Natural Resource Protection Act Permitting and Regulations
312 Canco Road #4, Portland, ME 04103
Phone: (207)-822-6300
Watershed Management Website: www.maine.gov/dep/land/watershed/index.html
Shoreland Zoning Website: www.maine.gov/dep/land/slz/
Natural Resource Protection Act permitting: www.maine.gov/dep/land/nrpa/

Appendices

Appendix A: Watershed Survey Form



Final Site #_____ Checked by _____ Date _____

Lake Watershed Survey

REMINDER: Only write up if there is likely transport of sediment or phosphorus into the lake.

Sector & Site _____ Date_____ Surveyor Initials _____

Location *(house #, road, utility pole #)* _____

Building Color _____ Landowner Name _____

Tax Map & Lot _____ Talked to Landowner? _____

Flow into Lake via (check ONE): ❒ Directly into Lake ❒ Stream ❒ Ditch ❒ Minimal Vegetation

Note: If flow does not make it into lake, do not fill out a form. It would not be considered a site.

GPS Coordinates in Latitude/Longitude Decimal Degrees (NAD83 or WGS84) — □□.□□□□□□°

□□.□□□□□□°

Land Use/Activity Circle ONE	**Description of Problems** Circle ALL that apply	
State Road	**Surface Erosion**	**Soil**
Town Road	Slight	Bare
Private Road	Moderate	Uncovered Pile
Driveway	Severe	Delta in Stream/Lake
Residential	**Culvert**	Winter Sand
Commercial	Unstable Inlet / Outlet	**Roof Runoff Erosion**
Municipal / Public	Clogged	**Shoreline**
Beach Access	Crushed / Broken	Undercut
Boat Access	Undersized	Lack of Shoreline Vegetation
Trail or Path	**Ditch**	Inadequate Shoreline Vegetation
Logging	Slight Erosion	Erosion
Agriculture	Moderate Erosion	Unstable Access
Construction Site	Severe Erosion	**Agriculture**
OTHER:	Bank Failure	Livestock Access to Waterbody
	Undersized	Tilled Eroding Fields
	Road Shoulder Erosion	Manure Washing off Site
	Slight	**OTHER:**
	Moderate	
	Severe	
	Roadside Plow/Grader Berm	

Slope: ❒ Flat ❒ Moderate ❒ Steep **Size of Area Exposed or Eroded** (length & width): _____

Site is linked to another: Cause of Site # _____ Result of Site # _____

Recommendations		
Culvert	**Roads / Driveways**	**Paths & Trails**
Armor Inlet/Outlet	Remove Grader/Plow Berms	Define Foot Path
Remove Clog	Build Up	Stabilize Foot Path
Replace	Add New Surface Material	Infiltration Steps
Enlarge	• Gravel	Install Runoff Diverter (waterbar)
Lengthen	• Recycled Asphalt	**Roof Runoff**
Install Plunge Pool	• Pave	Infiltration Trench @ roof dripline
Ditch	Reshape (Crown)	Drywell @ gutter downspout
Vegetate	Vegetate Shoulder	Rain Barrel
Armor with Stone	Install Catch Basin	**Other**
Reshape Ditch	Install Detention Basin	Install Runoff Diverter (waterbar)
Install Turnouts	Install Runoff Diverters	Mulch / Erosion Control Mix
Install Ditch	• Broad-based Dip	Rain Garden
Install Check Dams	• Open Top Culvert	Infiltration Trench
Remove debris/sediment	• Rubber Razor	Water Retention Swales
Install Sediment Pools	• Waterbar	**Vegetation**
Other Suggestions:	**Construction Site**	Establish Buffer
	Mulch	Add to Buffer
	Silt Fence / EC Berms	No Raking
	Seed / Hay	Reseed bare soil & thinning grass
	Check Dams	

Impact: Circle one choice in each column, add the three selected numbers together, and then circle the site's corresponding impact rating (high, medium, or low).

Type of Erosion	Area	Buffers and Other Filters	IMPACT
Gully - **3**	Large - **3**	No filter, all channelized direct flow into lake or stream - **3**	High: 8-9 pts
Rill - **2**	Medium - **2**	Some buffer or filtering, but visible signs of concentrated flow and/or sediment movement through buffer and into lake - **2**	Med: 6-7 pts
Sheet - **1**	Small - **1**	Significant buffer or filtering* - **1**	Low: 3-5 pts

* Confirm there is likely sediment/runoff delivery. If not, do not write up as a site.

Cost to Fix

High:	Greater than $2,500
Medium:	$500-$2,500
Low:	Less than $500

Technical Level to Install

High:	Site requires engineered design
Medium:	Technical person should visit site & make recommendations
Low:	Property owner can accomplish with reference materials

Potential Youth Conservation Corps project? Yes No

Appendix B: Table of Taylor Pond Watershed Survey Sites

Sector + Site	Location	Flow into lake via	Land Use/ Activity	Problem	Size of Area	Recommendations	Impact	Cost	Technical Level to Install
1-01	Chicoine Av	Directly into lake	Beach Access	Erosion directly into the lake via beach access erosion	50 x 15 ft	Establish a buffer, septic inspection	Medium	High: Greater than $3,000	Medium: Technical person should visit site + make recommendations
1-02	Chicoine Av	Directly into lake	Beach Access	Erosion directly into the lake via beach access erosion. Shoreline is undercut.	60 x 5 ft	Add to buffer, rip-rap to prevent further bank undercutting	Medium	High: Greater than $3,000	Medium: Technical person should visit site + make recommendations
1-03	Chicoine Av	Minimal Vegetation	Residential	Bare soil; uncovered soil pile. Bare soil looks like going to have a patio. Pile of stone	100 x 40 ft	reseed bare soil and thinning grass, erect erosion control measures during patio construction	Low	High: Greater than $3,000	Medium: Technical person should visit site + make recommendations
1-04	Valview Dr	Directly into lake	Residential	Undercut bank by eroding old tree root. Shoreline eroding	30 x 10 ft	Add to buffer, could use rip rap to protect the	Low	High: Greater than $3,000	Medium: Technical person should visit site + make recommendations
1-05	Valview Dr	Ditch	Residential	Perimeter or foundation PVC pipe outlet to small drain right next to riprap on shoreline. Wasn't flowing at time of visit.	2 x 2 ft	Double check to see what the pipe is draining from	Low	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
1-06	Valview Dr	Directly into lake	Residential	Driveway storm drain goes into a lower and higher pipe that go right into lake	1 x1 ft	Move pipe outlet to somewhere it can infiltrate	Medium	High: Greater than $3,000	Medium: Technical person should visit site + make recommendations
1-07	Valview Dr	Directly into lake	Beach Access	Undercut bank from Lake, undercutting through the tree roots	15 x 6 ft	Establish a buffer, install rip rap	High	High: Greater than $3,000	Medium: Technical person should visit site + make recommendations
1-08	Valview Dr	Directly into lake	Residential	Mature trees but bank undercutting beneath them. Section facing lake and onshore wind eroding feet over time.	90 x 8 ft	Add to buffer	High	Medium: $1,000-$3,000	Low: Property owner can accomplish with reference materials.
1-09	Ledgeview Rd	Ditch	Private Road	Road is flat and has no ditches. Lots of water pooled on the road. Has potential to runoff toward lake.	The whole road	Assess drainage area, Install ditch, Reshape road	Low	High: Greater than $3,000	High: Site requires engineered design
1-10	Ledgeview	Directly into lake	Residential	Rill surface erosion, shoreline is undercut. Roof runoff erosion.	20 x 4 ft	Infiltration trench, Add to buffer, Install Rip- rap	Medium	High: Greater than $3,000	Medium: Technical person should visit site + make recommendations

1-11	Ledgeview	Directly into lake	Residential	Looks like a dog yard with bare soil right next to steps directly down to the lake. Sheet erosion, bare soil	4 x 6 ft	Reseed bare soil and thinning grass, install runoff diverter, infiltration trench	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
1-12	Ledgeview	Directly into lake	Residential	Surface erosion, PVC pipe directly into the lake	2 x 2 ft	Investigate source of PVC pipe	Low	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
1-14	Ledgeview	Directly into lake	Residential	Shoreline undercut, bare ground near shore. Some runoff directly to pond.	100 x 4 ft	Add to buffer, reseed soil. Could add rip rap for shoreline protection	High	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
2-01	Pond View Court	Directly into lake	Residential	Erosion directly into the lake due to minimal vegetation and bare soil	10 x 15 ft	Establish buffer and cover bare soil on property	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
2-02	Pond View Court	Directly into lake	Residential	Ditch and surface erosion	4 x 50 ft	Check dams, Add to buffer	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
2-03	Pond Crest Ln, Pole 11.2	Directly into lake	Driveway	Erosion from driveway creating soil delta in lake. Neighbor says that during storms it washes out and creates delta in the lake. Neighbors pitch in to fix it. No formal road association. Pond Crest Lane.	15 x 75 ft	Reshape road, Install shrubs and/or water bar at lower end, Add less erosive surface material	High	High: Greater than $3,000	Medium: Technical person should visit site + make recommendations
2-04	Pond View Drive	Directly into lake	Trail or Path	Surface erosion occurring on trail/path. ROW for camp owners. Driveways may be contributing to this problem	7 x 50 ft	Erosion control mulch, Install runoff diverter and stabilize foot path	Low	Low: Less than $1,000	Medium: Technical person should visit site + make recommendations
2-05	Garfield Road near Pole 48	Stream	Town Road	Culvert is unstable and too small. Possible drainage issues. Road shoulder erosion	7 x 3 ft	Armor inlet/outlet, suggest town do it, road too dangerous for a YCC project	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
2-06	Garfield	Directly into lake	Residential	Erosion directly into the lake via surface erosion and lack of shoreline vegetation	5 x 5 ft	Add to buffer rip rap undercut area	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
2-07	Garfield	Directly into lake	Residential	Shoreline is undercut and there is lack of vegetation	10 x 15 ft	Stabilize with rip rap. Plant shrubs up top.	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
2-08	Garfield	Directly into lake	Residential	Erosion directly into the lake via surface erosion and bare soil	5 x 10 ft	Vegetate and establish a buffer	Medium	Low: Less than $1,000	Medium: Technical person should visit site + make recommendations

2-09	Sunrise Ln	Directly into lake	Residential	Erosion directly into the lake, shoreline undercut and eroded	20 x 40 ft of shoreline	Vegetate shoreline and reseed bare soil. Plant shrubs in bare area up top in front of house (30' x 40')	Medium	High: Greater than $3,000	Medium: Technical person should visit site + make recommendations
2-10	Sunrise Ln - Campground Beach	Directly into lake	Beach Access	Shoreline erosion	5 x 15 ft	Install Rip rap.	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
2-11	Sunrise Ln	Directly into lake	Residential	Surface erosion directly into the lake, Shoreline is undercut due to lack of vegetation	3 x 15 ft	Establish a buffer. Install Rip Rap.	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
3-01	Sandy Beach Rd	Ditch	Beach Access	Road shoulder erosion uphill from beach access. No buffer and no defined foot path. Runoff from road is coming down hill and carrying sediment directly into the lake.	60 x 20 ft	Address ditching issue on uphill roadway. Install runoff diverters. Define foot path. Add to buffer	High	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
3-02	Across from 4 Terrace Rd	Ditch	Town Road	Road Shoulder erosion. Storm drain not properly catching water running down from road. Ditching is inadequate-- spillover is causing erosion site 03-01.	40 ft	Vegetate shoulder. Inspect the catch basin	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
3-03	Terrace Rd	Minimal Vegetation	Residential	Bare soil and shoreline erosion	10 x 10 ft	Define foot path, use erosion control mulch, infiltration steps could be used	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
3-04	Terrace Rd	Minimal Vegetation	Residential	Driveway from this property is eroding and causing runoff into the neighbor to the left. Sheet surface erosion, rill road shoulder erosion	20 x 20 ft	Add to buffer, install a runoff diverter, talk with the neighbor as well	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
3-05	Terrace Rd	Minimal Vegetation	Residential	Sheet surface erosion and bare soil	10 ft	Erosion control mulch, stabilize foot path, add to buffer	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
3-06	Terrace Rd	Minimal Vegetation	Residential	Rill surface erosion, bare soil. There is a large stone firepit in their yard and it is eroding away into the hill	10 ft	reseed bare soil and thinning grass, recommend to owner that they contain the fire into the pit, otherwise it is going to keep eroding the soil on the hill	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.

3-07	Terrace Rd	Minimal Vegetation	Residential	Gully surface erosion, shoreline erosion due to inadequate shoreline vegetation	5 x 5 ft	Establish a buffer	Medium	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
3-08	Terrace Rd	Minimal Vegetation	Commercial	Surface sheet erosion and bare soil.	20 ft	Vegetate and re-seed bare soil on property	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
3-09	Terrace Rd (end of the road)	Ditch	Residential	Water entering lake via ditch, gully surface erosion Larger drainage issues occurring on this section of road, impacting several of the properties. Land above the road is being developed and erosion is running down.	20	Recommend a technical person investigate source of runoff. Vegetate ditch on the property, Install runoff diverters or a catch basin	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
3-10	Between 132 to 138 Terrace Rd	Minimal Vegetation	Private Road	Significant road shoulder erosion. Terrace road is private, it is unclear who owns this road, talked to multiple property owners and no one knows who has the road rights.	20 ft	Install ditches, catch basins, possible turnouts. Not much can be done until someone is willing to step up to maintenance of the road but it is a significant site due to the slope of the area.	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
3-11	East Shore Rd	Directly into lake	Residential	Gully surface erosion, shoreline is eroding and unstable	50 ft	Entire retaining wall is eroding and also in front of a major erosion site	High	Medium: $1,000-$3,000	High: Site requires engineered design
3-12	Cove Road	Minimal Vegetation	Residential	Surface erosion on property, entering the lake via minimal vegetation	20 x 20 ft	Define footbath, establish a buffer	Medium	Low: Less than $1,000	Medium: Technical person should visit site + make recommendations
3-13	Cove Rd	Directly into lake	Residential	Possible Culvert Outlet on property owner says it's been here for a long time he guesses it's coming from drainage from the road but it's never been determined says water flows out very fast during storm events he keeps replacing the soil that's on the shoreline above This outlet and you can see a very large depression and owner has been replacing the lost soil (would be open to doing work to assess source of water)	Unknown	Assess drainage area and determine source of the culvert outfall	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations

3-14	Cove Rd	Minimal Vegetation	Residential	Surface sheet erosion, bare soil. Roof runoff is running across property and causing erosion	10 x 10 ft	Infiltration trench along roof dripline, add to buffer, reseed bare soil	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
3-15	Shore Path	Minimal Vegetation	Residential	Sheet surface erosion, bare soil and lack of shoreline vegetation	5 ft	Erosion control mulch	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
4-01	Wyman	Minimal Vegetation	Driveway	Roof runoff from this site is contributing to road erosion (rills)	100 ft	Drywell at gutter downspout, reshape driveway so runoff goes into ditch	Low	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
4-02	Wyman Rd	Directly into lake	Private Road	Road Shoulder Rill Erosion, Roadside plow/grader berm, roof runoff erosion, Partial cause of 04-01	200 ft	Reshape road and ditch and install culverts at driveway	Medium	High: Greater than $3,000	High: Site requires engineered design
4-03	Taywood (bottom of road)	Ditch	Private Road	Rill Road Shoulder Erosion, Roof Runoff, Grader Berm, Erosion from this site causing ponding at 04-04	100 ft	Add gravel build up and reshape road. Add drywells at gutters on 116, possibly add ditch or divert water, add culvert or water bar across driveway of 122 Taywood	High	High: Greater than $3,000	High: Site requires engineered design
4-04	Taywood	Ditch	Private Road	Erosion from 4-03 causing ponding at this site, possible larger drainage issues, ditch is undersized, roadside berm	100 ft	Assess drainage area, reshape ditch and remove debris, build up/reshape road	High	High: Greater than $3,000	High: Site requires engineered design
4-05	Waterview Drive	Ditch	Private Road	Road erosion linked ot 04-03, 04-04: Rill Surface erosion, Road shoulder erosion	150 ft	Install turnouts, reshape the road, install catch basin and runoff diverters	Medium	High: Greater than $3,000	High: Site requires engineered design
4-06	Taywood	Minimal Vegetation	Driveway	Gravel driveway experiencing gully surface erosion	150 ft	Install turnouts, install catch basin, run off diverters. Establish buffer.	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
4-07	Taywood Rd	Ditch	Private Road	Causing lots of road erosion and also experiencing surface erosion. Road shoulder erosion	250 ft	Assess drainage area. Install ditch along vegetated side of road and water bars every	Medium	High: Greater than $3,000	High: Site requires engineered design
4-08	Simpsons Beach Rd	Directly into lake	Private Road	Culvert blocked by vegetation	60 x 10 ft	Assess drainage area, Armor outlet, Add plunge pool, Further assessment needed	Medium	High: Greater than $3,000	Medium: Technical person should visit site + make recommendations
4-09	Willard Rd near Pole 86-3	Stream	Private Road	Culvert Diameter is too small, ditch sheet erosion	50 ft	Enlarge the culvert, remove accumulated sediment and debris	Medium	High: Greater than $3,000	High: Site requires engineered design

4-10	Culvert road crossing near 11 Waterview	Stream	Private Road	Culvert appears to be not functioning and water is traveling through the road instead—further assessment is needed	20 ft	Replace and/or realign the culvert, Assess drainage area	Medium	High: Greater than $3,000	High: Site requires engineered design
4-11	Willard Rd	Directly into lake	Private Road	Culvert undersized, Erosion diverted into Bearor lawn and leading directly to pond. Erosion from Willard is shedding down road and combining with culvert outflow onto Bearor property	100 x 10 ft	Enlarge culvert, Assess drainage area, Divert water towards vegetative buffer, away from lawn	High	High	High: Site requires engineered design
5-01	Stream outlet on yacht club property	Directly into lake	Commercial	Stream bank eroding and erosion at mouth of stream. Sediment being washed out to pond. Rills in sandbank carrying sediment to pond. Connected to site 5-02.	30 x10 ft	Install check dams and/or rain garden to slow water and allow sediment to settle from stormwater upstream	Medium	Low: Less than $1,000	Medium: Technical person should visit site + make recommendations
5-02	Forested area on yacht club property, up from shoreline	Stream	Commercial	Upstream of 5-01. Stream bank is undercut and material is carried down to pond. Sediment washed downstream of site 5-01	15 x 8 ft	Challenging site. Install check dams and other BMPs to slow water during heavy rain events. Address problem at mouth into pond.	Medium	Low: Less than $1,000	Medium: Technical person should visit site + make recommendations
5-03	West Shore Rd	Ditch	Private Road	Rill surface erosion, road shoulder erosion gully	15 x 30 ft & 15 x 30 ft	Armor ditch with stone and remove any accumulated debris	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
5-04	West Shore Rd	Ditch	Driveway	Driveway ditch erosion between 201 and 195 West Shore Rd, Road shoulder erosion	20 x 20 ft	Neighbor Edmond mentioned Garcia wants to do away with paved driveway and do gravel driveway which would solve sheet erosion from higher sediment off rd. Sediment pools on asphalt road section	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
5-05	West Shore Rd	Directly into lake	Residential	Bare soil, surface erosion, Runoff carrying beach sand into the lake	10 x 5 ft	Install check dam to slow runoff before it reaches the beach.	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.

5-06	Everett Rd	Minimal Vegetation	Residential	Sheet surface erosion, minimal vegetation along shore	10 x 50 ft & 15 x 20 ft	Establish a defined footpath or driveway from house to lake. Seed bare soil or plant vegetation (or ECM). Install runoff diverters to offset runoff draining down driveway/path.	Low	Low: Less than $1,000	Low: Property owner can accomplish with reference materials.
5-07	Youngs Corner Rd	Directly into lake	Boat Access	Gullies forming on surface, road shoulder erosion (rills), Shoreline erosion, Lack of shoreline vegetation. (Connected with 5-08)	12 x125 ft & 12 x 50 ft	Challenging site. Install rip rap and large boulders along shoreline. Install plunge pool or turnout for culvert. onto boat launch and erodes in effort to slow up fast water and sediment. Establish buffer and berm. Technical person or engineer should visit site and make recommendations.	High	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
5-08	Youngs Rd	Directly into lake	Beach Access	Runoff from this property and site 5-07 causing erosion, Sheet erosion present across surface and along road shoulder. Shoreline undercut and eroded. Sediment from the road and bare ground present in stream.	20 x 100 ft and 30 x 40 ft	Runoff diverters across beach access road. Seed bare soil or plant vegetation (or ECM). Define and stabilize foot paths. Add to buffer. Install check dams to slow pace of stream. Install culvert under platform. Armor outlet and/or install plunge pool. Recommend site visit from technical person for further assessment.	High	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
5-09	Youngs Corner Rd	Ditch	Driveway	Sediment from construction and clear cut uphill is adding to sediment wash and amount of water rushing to lake. Eroding 5-07 and 5-08 further. Diverting water off to other side of road into ravine may help stop sheet runoff on road. Hold basin would be good before culvert on Bernard property	100 x 10 ft	Install runoff diverters	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations

5-10	Youngs Corner Rd	Stream	Residential	Road shoulder runoff. Rills and sheet erosion present across surface and in ditch. Bare soil and winter sand present. Runoff and erosion is exacerbated by construction. Sand and salt present in Roaring Brook forming delta at mouth. Linked to 5-07, 5-08, 5-09.	25 x 50 ft and 10 x 300 ft	Challenging site(s). Install Erosion Control BMPs for construction site (Silt fencing, ECM mulch and berms). Install catch basin. Reach out to city to address sand/salt deposits. Recommend technical person or engineer visit site(s) for further assessment.	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
6-01	Along Center Minot Hill Rd, lot under construction	Ditch	Town Road	Culvert is crushed on lot that is under construction. No erosion controls on site of the construction lot	10 x 10 ft	Establish BMP for construction on site, Replace/Repair culvert	Low	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
6-02	On the side of the road across from 398 Minot	Ditch	Town Road	Ditch Sheet erosion, road shoulder erosion	5 x 200 ft	Reshape ditch, Remove debris and sediment,	Low	High: Greater than $3,000	High: Site requires engineered design
6-03	Cross Road	Ditch	Town Road	Culvert is clogged, road ditching bank failure and erosion, road shoulder is also eroding	6 x 20 ft	Remove clog, Vegetate ditch and armor with stone	Low	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
6-04	Cross Road	Ditch	Driveway	Causing sites 6-03, Gully surface erosion of a driveway.	10 x 500 ft	Reshape Driveway (Add gravel and buildup), Install runoff diverters	Medium	High: Greater than $3,000	High: Site requires engineered design
6-05	Cross Road	Stream	Town Road	Town road gully erosion, culvert too short. Rip-rap and plunge pool should be extended	6 x 20 ft	Install plunge pool	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
6-06	Jackson Hill Road	Ditch	Residential	Ditch is undersized and eroding, the road shoulder is eroding	5 x 50 ft	Reshape ditch, Install turnouts, Vegetate	Low	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
6-07	Jackson Hill Rd, culvert crossing	Stream	Town Road	Culvert clogged, road shoulder erosion	10 x 5	Vegetate, armor with stone, remove debris	Low	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
6-08	Lost Valley Road	Stream	Commercial	Large dirt/gravel parking lot area eroding into small ditch, straight unfiltered flow into culvert. Obvious signs of sediment in streams.	10000 sq ft	Vegetate and conduct ditch maintenance, rain garden, establish buffer	Medium	High: Greater than $3,000	High: Site requires engineered design

6-09	Lost Valley Road	Stream	Commercial	Japanese knotweed was removed from the stream bank, but no new vegetative buffer was established.	10 x 600 ft	Vegetate shoulder, install runoff diverter. Remove invasive plants	Medium	High: Greater than $3,000	Medium: Technical person should visit site + make recommendations
6-10	Young's Corner Road, stream crossing east of lost valley road	Stream	Town Road	Road shoulder erosion,	5 x 5 ft	armor with stone, vegetate shoulder	Low	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
7-01	Perkins Ridge Rd CMP 86	Stream	Town Road	Culvert is unstable and too small. Road shoulder erosion. Road is currently under construction and will be paved again. Culvert outlet is perched.	40 x15 ft	Septic Inspection. Enlarge and realign culvert, Install ditch, Reshape road.	Medium	High: Greater than $3,000	High: Site requires engineered design
7-02	Perkins Ridge Rd, CMP 97	Stream	Town Road	Road shoulder erosion. Site is a road construction of a road. Erosion control mulch has been used to create berms, but there is a spot that isn't covered.	30 x 15 ft	Mulch erosion control mix, seed/hay, silt fence	Medium	Medium: $1,000-$3,000	Medium: Technical person should visit site + make recommendations
7-03	CMP#9, Perkins Ridge Rd	Stream	Town Road	Culvert is part of Stream crossing underneath Road. Road is currently under construction. There is a pipe that is feeding into the stream currently which might be a temporary fix for the construction site, but is currently feeding directly into stream. Culvert is hanging significantly	50 x 25 ft	Enlarge, adjust length of culvert, could replace, pave vegetate shoulder	Medium	High: Greater than $3,000	High: Site requires engineered design
7-04	Marston Hill Rd., Brighton Hill	Stream	Town Road	Culvert is old metal, bottom is completely rusted away. There is some road erosion and gravel getting into the stream.	50 x 20 ft	Replace or enlarge culvert, vegetate shoulder,	Low	High: Greater than $3,000	High: Site requires engineered design
7-05	Brighton Hill Rd.	Stream	Town Road	Culvert diameter too small, Ditch erosion, Road shoulder erosion, large deposit of gravel at outlet of culvert	100 x 10 ft	Vegetate, armor and reshape ditch. Vegetate Shoulder	High	High: Greater than $3,000	High: Site requires engineered design
7-06	Death Valley Rd	Stream	Town Road	Road shoulder is eroding into stream, culvert outlet is hanging, significant gravel in stream	25 x 25 ft	Establish buffer, reseed bare soil, vegetate shoulder, replace culvert	High	High: Greater than $3,000	High: Site requires engineered design

7-07	Harris Rd.	Stream	Town Road	Long steep ditch empties into outlet of culvert. Significant erosion up the ditch and quite a bit of gravel observed in the bottom of the stream. Culvert outlet is hanging, diameter too small, ditch and road shoulder are eroding,	250 x 10 ft	replace or enlarge the culvert, install check dams in the ditch, vegetate/armor with stone	High	High: Greater than $3,000	High: Site requires engineered design
7-08	Harris Rd. CMP25,	Stream	Town Road	Culvert outlet is hanging, culvert diameter is too small. Ditch and road shoulder erosion	25 x 15 ft	replace, enlarge, armor the inlet and outlet of the culvert/establish a buffer	Medium	High: Greater than $3,000	High: Site requires engineered design
7-09	Harris Rd, Death Valley Rd, CMP 44	Stream	Town Road	Stream bank is undercut. Road shoulder erosion. No ditching. Downhill runoff and gravel from the road going directly into the stream.	400 x 20 ft	Armor the inlet/outlet of the culvert, install roadside ditch, check dams, vegetate shoulder,	High	High: Greater than $3,000	High: Site requires engineered design
7-10	Death Valley Rd.	Stream	Town Road	This culvert is severely hanging. Road shoulder erosion leading to the culvert/stream.	50 x15 ft	Replace or enlarge culvert, Vegetate the shoulder.	Low	High: Greater than $3,000	High: Site requires engineered design
7-11	Death Valley Rd. CMP 15	Stream	Town Road	This small stream is flowing through a very misaligned culvert. The pool at the inlet is deep and the culvert is not adequate for the flow	15 x15 ft	Replace/realign/enlarge	Low	High: Greater than $3,000	High: Site requires engineered design
7-12	Adjacent to 94 Marston Hill Rd CMP #506	Stream	Town Road	This culvert is too small for the amount of water coming through. There is also a ditch with significant flow after the rain that is emptying directly into the stream. There is erosion from the road shoulder that is making it into the ditch.	150 x15 ft	Enlarge culvert, vegetate, armor, install check dams within ditches	Low	High: Greater than $3,000	High: Site requires engineered design
7-13	Marston Hill Rd, CMP 36	Stream	Town Road	This site has deep gullies eroded into either side of the road that flow directly into the stream. The culvert is off to the side in very thick vegetation.	100 x 20 ft	Enlarge Culvert, vegetate road shoulder	High	High: Greater than $3,000	High: Site requires engineered design